

## Transfer Program in Electrical & Computer Engineering

Listed below are the courses offered at Vermilion Community College that apply to the Bachelor of Science degree in Electrical & Computer Engineering at the University of Minnesota Duluth. After successful completion of the listed Vermilion courses, students may complete the B. S. in Electrical & Computer Engineering with additional full-time study at UMD.

<b>Vermilion Community College Courses to Complete</b>	<b>cr.</b>	<b>UMD Requirements Satisfied by Vermilion Courses</b>	<b>cr.</b>
Engl 1511 College Composition I	4	Comp 1120 College Writing	4
Chem 1522 General Chemistry I*	5	Chem 2172 General Chemistry *	4
Chem 1523 General Chemistry II*	5		
Math 1561 Calculus I	5	Math 1296 Calculus I	5
Math 1562 Calculus II	5	Math 1297 Calculus II	5
Phys 2561 Engineering Physics I	5	Phys 1201 Mechanics	4
Phys 2562 Engineering Physics II	5	Phys 1204 Elec., Magnet., and Optics	5
Liberal Education Electives	26		

### *Courses to Complete at UMD*

CS 1511 Computer Science I	5	ECE 3151 Control Systems	3
CS 1521 Computer Science II	5	ECE 3235 Electronics II	4
ECE 1001 Introduction to ECE	2	ECE 3341 Digital Computer Circuits	4
ECE 1315 Digital System Design	4	ECE 3445 Electromagnetic Fields	3
ECE 2006 Electrical Circuit Analysis	4	ECE 4305 Computer Architecture	4
ECE 2325 Microcomputer System Design	4	ECE 4899 Senior Project I	1
ECE 3611 Intro to Solid State Semicon.	3	ECE 4999 Senior Project II	3
Math 3280 Differential Eq. w/Linear Alg.	4	ECE Technical Electives	6
Math 3298 Calculus III	4	Stat 3611 Introduction to Statistics	4
Comp, 3130 Adv. Writing: Engineering	3	Engineering Breadth course	
CS 2511 Software Development	4	Adv. Social Science Elective	
CS 5631 Operating Systems	4	<i>ECE majors must complete 16 credits</i>	
ECE 2111 Linear Systems & Signal Anal.	4	<i>in liberal education categories 6-9.</i>	
ECE 2212 Electronics I	4	Remaining Liberal Education Requirements	
		*Students may prefer to take the one-semester	
		Chem 2172 course at UMD	

### **Bachelor of Science in Electrical & Computer Engineering**

This program of study combines topics from traditional electrical engineering with current topics that focus on computer design and analysis. Electrical and Computer Engineering is concerned with the theory, design and application of electrical phenomena and digital computers, including electronic circuits, signal analysis, system design and computer architecture. Minors in both mathematics and computer science are automatically satisfied with this major.

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### Further Information:

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